



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/753,900      | 01/07/2004  | Susan Jamie Borofsky | 1592.028US1         | 8154             |

7590 01/26/2007  
NCR Corporation  
Attn. James A. Stover  
101 West Schantz Ave.  
Dayton, OH 45409

|          |
|----------|
| EXAMINER |
|----------|

PYO, MONICA M

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2161

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 01/26/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/753,900 | <b>Applicant(s)</b><br>BOROFSKY ET AL. |  |
|                              | <b>Examiner</b><br>Monica M. Pyo     | <b>Art Unit</b><br>2161                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***DETAILED ACTION***

1. This communication is responsive to the Amendment filed 10/27/2006.
2. Claims 1-21 are currently pending in this application. Claims 1, 8 and 15 are independent claims. In the Amendment filed 10/27/2006, claims 1, 8 and 15 are amended. This action is made Final.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is unclear what the phrase “which use the key and table selections” refers to. Does it refer to “the modifications” in line 12 or does it refer to “querying the mapped” in line 12? Clarification is required.

Claims not specifically mentioned above are rejected by virtue of their dependency to a rejected claim.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, 4-10, 12-13 and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0103017 by Reed et al. (hereinafter Reed) in view of U.S. Patent No. 5,966,695 issued to Melchione et al. (hereinafter Melchione), and further in view of U.S. Patent No. 7,080,066 issued to Scheurich et al. (hereinafter Scheurich).

Regarding Claim 1, Reed disclose a method for custom query generation, comprising:

**A). a segmentation tool, wherein the query is directed to one or more data sources that are not mapped in the segmentation tool, as a Prospect Analytic Record when the targeted consumers are not current customers (Reed: pg. 3, [0027-0028]);**

**B). receiving a key selection and a table selection for the query, wherein the key and table selections are associated with data elements within the segmentation tool, as the txn\_table and the behavior\_segment (Reed: pg. 3, [0029]);**

**C). modifying the query using the key and table selections with the different data sources, as the txn\_table and the cust\_id (Reed: pg. 3, [0030]); and**

**D). generating a custom query based on the query and the modifications, wherein when the custom query is executed within the segmentation tool a customer segment for a marketing campaign is generated by querying the unmapped data sources with the query to get the results and then by querying with the modifications, which use the key and table selections, to acquire the selective data elements in order to produce the customer segment, as the Prospect Analytic Record when the targeted consumers are not current customers and as the txn\_table and the cust\_id (Reed: pg. 3, [0030, 0031, 0035], pg. 4, [0043]).**

Reed does not explicitly disclose:

- A). **receiving a query; that is mapped to different data sources;**
- B)/C). **a customer hierarchy;**
- C). **to link results of the query to selective data elements associated;**
- D). **the mapped different data sources; from the customer hierarchy**

However, Melchione discloses:

A). **receiving a query**, as receiving a particular element from a user (Melchione: col. 11, lns. 65-67; col. 12, lns. 1-3).

B)/C)/D). **a customer hierarchy**, as a three-tier-hierarchy with households, customers, and accounts (Melchione: col. 10, lns. 66-col. 11, lns. 16);

It would have been obvious to a person with ordinary skill in the art at the time of invention to apply the hierarchy and a user query of Melchione in the customer segmentation method of Reed. Skilled artisan would have been motivated to incorporate the Melchione's hierarchy and a user query in the customer segmentation method of Reed to utilize a customer database with records hierarchy (Melchione: col. 1, lns. 60-65).

Reed and Melchione do not explicitly disclose:

- A)/D). **that is mapped to different data sources;**
- C). **to link results of the query to selective data elements associated**

However, Scheurich disclose:

A)/D). **that is mapped to different data sources**, as the source set mapped to the data set (Scheurich: col. 27, lns. 45-48);

C). **to link results of the query to selective data elements associated**, as the item sched\_ccordinator\_id to tie back to the query (Scheurich: col. 27, lns. 60-col. 28, lns. 15).

It would have been obvious to a person with ordinary skill in the art at the time of invention to apply the system to refine a decision making process of Scheurich in a hierarchy and a user query of Melchione, and in the customer segmentation method of Reed. Skilled artisan would have been motivated to combine the Scheurich's teaching of mapping data sources and linking results of the query in the Melchione's hierarchy and a user query in the customer segmentation method of Reed to enhance making a proper decisions by allowing a user to build up a collection of queries to further investigate (Scheurich: col. 2, lns. 46-55).

Regarding Claims 2, 12 and 17, Reed and Melchione and Scheurich disclose the method wherein receiving the query further includes importing a file that includes at least a portion of the query into a segmentation query-build interface (Reed: pg. 3, [0028]) and (Melchione: col. 10, lns. 53-62).

Regarding Claims 4 and 19, Reed and Melchione and Scheurich disclose the method wherein the receiving the query further includes receiving at least a portion of the query from a paste operation into a segmentation query-build interface (Reed: pg. 3, [0028]) and (Melchione: col. 20, lns. 21-34).

Regarding Claims 5 and 13, Reed and Melchione and Scheurich disclose the method further comprising associating a unique identifier with the custom query, wherein the unique

Art Unit: 2161

identifier is used to save and recall the custom query for subsequent use (Melchione: col. 24, lns. 42-57) and (Reed: pg. 4, [0040]).

Regarding Claim 6, Reed and Melchione and Scheurich disclose the method further comprising receiving a command to execute the custom query from within the segmentation tool (Reed: pg. 3, [0028, 0029]) and (Melchione: col. 13, lns. 44-47).

Regarding Claim 7, Reed and Melchione and Reed disclose the method further comprising mapping data elements associated with the custom query to the segmentation tool for subsequent uses (Melchione: col. 24, lns. 42-57) and (Reed: pg. 4, [0040]).

Regarding Claim 8, Reed discloses a custom query for segmentation system, comprising:

**A). a segmentation tool to generate customer segmentations for marketing campaigns,** as a marketing using insight driven customer interaction (Reed: pg. 3, [0027-0028]; pg. 4, [0043]); and

**B). a custom query interface integrated into the segmentation tool,** as an extraction from a database via a Prospect Analytic Record (PAR)(Reed: pg. 3, [0027-0028. 0036]);

**C). wherein the custom query interface generates custom queries to tables and data elements which are not mapped in the segmentation tool, and wherein from the segmentation tool and generate the customer segmentations defined by results of the custom queries and tables included in the segmentation tool in order to generate the custom**

Art Unit: 2161

**segmentation**, as the PAR when the targeted customers are not current customers and as the `txn_table` and the `cust_id` (Reed: pg. 3, [0028]; pg. 4, [0041]).

Reed does not explicitly disclose:

C). **the custom queries execute; by linking the results of the custom queries to selective mapped elements;**

However, Melchione discloses:

C). **the custom queries execute**, as a query execution (Melchione: col. 27, lns. 60-65).

It would have been obvious to a person with ordinary skill in the art at the time of invention to apply the hierarchy and a user query of Melchione in the customer segmentation method of Reed. Skilled artisan would have been motivated to incorporate the Melchione's hierarchy and a user query in the customer segmentation method of Reed to utilize a customer database with records hierarchy (Melchione: col. 1, lns. 60-65).

Reed and Melchione do not explicitly disclose:

C). **by linking the results of the custom queries to selective mapped elements;**

However, Scheurich discloses:

C). **by linking the results of the custom queries to selective mapped elements**, as the item `sched_coordinator_id` to tie back to the query (Scheurich: col. 27, lns. 60-col. 28, lns. 15).

It would have been obvious to a person with ordinary skill in the art at the time of invention to apply the system to refine a decision making process of Scheurich in a hierarchy and



Art Unit: 2161

a user query of Melchione, and in the customer segmentation method of Reed. Skilled artisan would have been motivated to combine the Scheurich's teaching of mapping data sources and linking results of the query in the Melchione's hierarchy and a user query in the customer segmentation method of Reed to enhance making a proper decisions by allowing a user to build up a collection of queries to further investigate (Scheurich: col. 2, lns. 46-55).

Regarding Claim 9, Reed and Melchione and Scheurich disclose the system wherein the segmentation tool includes a query selection interface having at least two options, a first option for selecting queries associated with mapped tables, and a second option for selecting the custom query interface for generating the custom queries (Reed: pg. 3, [0028]) and (Melchione: col. 10, lns. 53-62; col. 13, lns. 16-26; col. 15, lns. 58-67).

Regarding Claim 10, Reed and Melchione and Scheurich disclose the system wherein the custom queries are written in SQL syntax (Reed: pg. 3, [0029-0030]).

Regarding Claim 15, Reed discloses a custom query data structure for segmentation implemented in a computer-readable medium, comprising:

**A). a key to a data element associated with a data store table, wherein the data element and the table are associated with,** as the txn\_table and the behavior\_segment (Reed: pg. 3, [0029]);

**B). logic directed to data sources not mapped in a segmentation tool,** as targeted consumers are not current customers (Reed: pg. 3, [0028]); and

Art Unit: 2161

C). **automatically generated query logic based on the key and the table**, as an example, the CAR may themselves create additional variables (Reed: pg. 3, [0029]; pg. 6, [0055-0056]);

D). **wherein the key, and automatically generated query logic form a custom query, which when executed from the segmentation tool generates a customer segmentation for a marketing campaign from the unmapped data sources to selective portions of the via the key and the table associated within the segmentation tool to produce the customer segmentation**, as the PAR when the targeted consumers are not current customers and as the txn\_table and the cust\_id (Reed: pg. 3, [0031, 0035]; pg. 4, [0043]; pg. 6, [0055, 0056]).

Reed does not explicitly disclose:

- A). **a customer hierarchy;**
- B). **user-supplied query logic.**
- D). **by linking the user-supplied query logic and its results; with mapped sources; customer hierarchy**

However, Melchione discloses:

A)D). **a customer hierarchy**, as a tree-tier-hierarchy element from a user (Melchione: col. 10, lns. 66-67; col. 11, lns. 1-16);

B)/D). **user-supplied query logic**, as receiving a particular element from a user (Melchione: col. 11, lns. 65-67; col. 12, lns. 1-3).

It would have been obvious to a person with ordinary skill in the art at the time of invention to apply a hierarchy and a user query of Melchione in the customer segmentation method of Reed. Skilled artisan would have been motivated to incorporate the Melchione's

Art Unit: 2161

hierarchy and a user query in the customer segmentation method of Reed to utilize a customer database with records hierarchy (Melchione: col. 1, lns. 60-65).

Reed and Melchione do not explicitly disclose:

D). **by linking and its results; with mapped sources**

However, Scheurich discloses:

D). **by linking and its results; with mapped sources**, as the source set mapped to the data set (Scheurich: col. 27, lns. 45-48; 60-col. 28, lns. 15).

It would have been obvious to a person with ordinary skill in the art at the time of invention to apply the system to refine a decision making process of Scheurich in a hierarchy and a user query of Melchione, and in the customer segmentation method of Reed. Skilled artisan would have been motivated to combine the Scheurich's teaching of mapping data sources and linking results of the query in the Melchione's hierarchy and a user query in the customer segmentation method of Reed to enhance making a proper decisions by allowing a user to build up a collection of queries to further investigate (Scheurich: col. 2, lns. 46-55).

Regarding Claim 16, Reed and Melchione and Scheurich disclose the data structure wherein the user-supplied query logic is supplied from within a custom query interface that is integrated into the segmentation tool (Reed: pg. 3, [0027-0028]).

Regarding Claim 18, Reed and Melchione and Scheurich disclose the data structure wherein the user-supplied query logic is manually entered into the custom query interface (Reed: pg. 3, [0028]) and (Melchione: col. 26, lns. 42-52).

Regarding Claim 20, Reed and Melchione and Scheurich disclose the data structure wherein the syntax of the user-supplied query logic is validated by the custom query interface (Reed: pg.3, [0028]) and (Melchione: col. 11, lns. 66-67; col. 12, lns. 1-6).

Regarding Claim 21, Reed and Melchione and Scheurich disclose the data structure wherein the automatically generated query logic is not modifiable (Melchione: col. 14, lns. 37-45).

7. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reed in view of Melchione further in view of Scheurich as applied to claims 1-2, 4-10, 12-13 and 15-21 above, and further in view of U.S. Patent Application Publication No. 2003/0220917 by Copperman et al. (hereafter Copperman).

Regarding Claims 3 and 11, Reed and Melchione and Scheurich disclose the method wherein interacting with a segmentation query-build interface (Reed: pg. 3, [0028]).

Reed and Melchione and Scheurich do not explicitly disclose:

the method wherein receiving the query further includes interactively receiving at least some portions of the query from a user.

However, Copperman discloses the user interaction and the user's responses, which correspond to disclose the method wherein receiving the query further includes interactively receiving at least some portions of the query from a user (Copperman: pg. 4, [0034]).

It would have been obvious to a person with ordinary skill in the art at the time of invention to apply the user's response by interaction of Copperman in the system to refine a decision making process of Scheurich in a hierarchy and a user query of Melchione, and in the customer segmentation method of Reed. Skilled artisan would have been motivated to combine the Copperman's teaching of user's response by interaction in the Scheurich's teaching of mapping data sources and linking results of the query in the Melchione's hierarchy and a user query in the customer segmentation method of Reed to enhance making a proper decisions by allowing a user to enhance the query method within the CRM system (Copperman: pg. 1, [0006]).

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reed in view of Melchione further in view of Scheurich as applied to claims 1-2, 4-10, 12-13 and 15-21 above, and further in view of U.S. Patent No. 6,480,836 issued to Colby et al. (hereafter Colby).

Regarding Claim 14, Reed and Melchione and Scheurich disclose the system wherein the custom query interface includes an option that displays documentation and about the custom queries (Reed: pg. 3, [0028]) and (Melchione: col. 32, lns. 15-23).

Reed and Melchione and Scheurich do not explicitly disclose other metadata.

However, Colby discloses a metadata to corresponds with other metadata (Colby: col. 5, lns. 38-49).

It would have been obvious to a person with ordinary skill in the art at the time of invention to apply the metadata of Colby in the system to refine a decision making process of Scheurich in a hierarchy and a user query of Melchione, and in the customer segmentation method of Reed. Skilled artisan would have been motivated to combine the Colby's teaching of utilizing a metadata in the Scheurich's teaching of mapping data sources and linking results of the query in the Melchione's hierarchy and a user query in the customer segmentation method of Reed to enhance making a proper decisions by allowing a user to utilize the feature of saving the table view via metadata (Colby: col. 1, lns. 24-30).

#### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2161

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica M. Pyo whose telephone number is 571-272-8192. The examiner can normally be reached on Mon-Fri 6:30 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mp

1/17/2007

Monica M Pyo  
Examiner  
Art Unit 2161

  
JEFFREY GAFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100